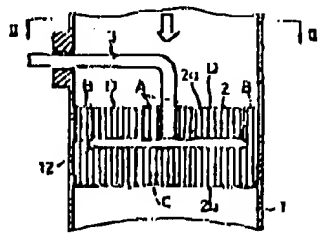
(54) ELECTRIC HEATING TYPE CATALYST DEVICE
(11) 5-171928 (A) (43) 9.7.1993 (19) JP
(21) Appl. No. 3-339138 (22) 21.12.1991
(71) TOYOTA MOTOR CORP(1) (72) HIROSHI HIRAYAMA(4)
(51) Int. Cl⁵. F01N3/20,B01J35/02,B01J35/04,F01N3/24,F01N3/28

PURPOSE: To manufacture a core of a catalyst converter easily, and assemble it easily.

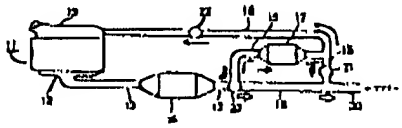
CONSTITUTION: A flat foil and a corrugated foil are overlapped on each other and rolled spirally to form a core 2. In the flat foil and the corrugated foil, a slit extending from an end part of their length along the length is formed, so by rolling the flat foil and the corrugated foil spirally, they are connected to each other at peripheral parts, while at a center part, a pair of core parts 2a, 2b having an interval from each other are formed. An inner end part of the core part 2a is connected to an electrode 3, so the core part 2a is heated electrically. In the meanwhile, a current does not flow to the core part 2b, so the core part 2b is not heated electrically.



(54) EXHAUST EMISSION CONTROL DEVICE FOR INTERNAL COMBUSTION ENGINE
(11) 5-171929 (A) (43) 9.7.1993 (19) JP
(21) Appl. No. 3-343196 (22) 25.12.1991
(71) NISSAN MOTOR CO LTD (72) MIKIO MATSUMOTO
(51) Int. Cl⁵. F01N3/24

PURPOSE: To activate catalyst speedily, and trap unburnt gas only with adsorption material effectively by disposing a passage part for having the unburnt gas adsorption material in an exhaust passage downstream of the catalyst.

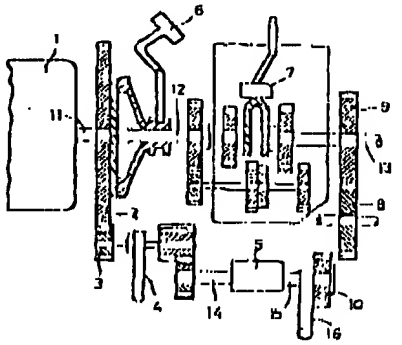
CONSTITUTION: When catalyst 14 is cold at the time of starting an engine 11 or the like, a flow passage changing valve 20 is changed to a position where an exit part of the catalyst 14 and a first branch passage part 15 only communicate with each other. A flow passage switching valve 21 is also released at the same time. Exhaust is purified in the catalyst 14, while the unburnt gas in unpurified exhaust is guided through the first branch passage part 15 to the adsorption material 17 to be trapped. In the meanwhile, after the catalyst 14 is heated and activated, the flow passage changing valve 20 is changed to the position where the exit of the catalyst 14, and both of the first and second branch passage parts 15, 16 communicate with each other. Simultaneously, the flow passage switching valve 21 is closed. An exhaust heat quantity for heating he catalyst 14 can thus be secured sufficiently, and the unburnt gas only can be trapped by the adsorption material 17 effectively.



(54) ENERGY RECOVERING DEVICE
(11) 5-171930 (A) (43) 9.7.1993 (19) JP
(21) Appl. No. 3-354292 (22) 20.12.1991
(71) ISUZU MOTORS LTD (72) KATSUNORI HIRAI
(51) Int. Cl⁵. F01N5/04,H02K23/52

PURPOSE: To provide an energy recovering device in which a recovering motor is provided with a function of a starter and a function of supplying driving force to a drive shaft by changing gears in starting an engine and transmitting power.

CONSTITUTION: An energy recovering device comprises recovering motor 5 disposed in a power transmission system bypassing a transmission 7, and the recovering motor 5 is provided with a gear for starting which can be connected ton an engine 1, and a gear 10 for power transmission which can be connected to a drive shaft. At starting the engine 1, the gear 3 for starting is connected to the engine 1 by a connection means 4, and at transmission of power, the gear 10 for power transmission is connected to the drive shaft 13 rearward of the transmission 7 by a connection means 16. The recovering motor 5 has a function of a starter motor and a function of returning a recovered energy to a drive system.



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特開平5－171929

(43)公開日　平成５年(1993)７月９日

(51)Int.Cl.⁵	識別記号	庁内整理番号	Ｆ１	技術表示箇所
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(21)出願番号　特願平3－343196

(22)出願日　平成３年(1991)12月25日

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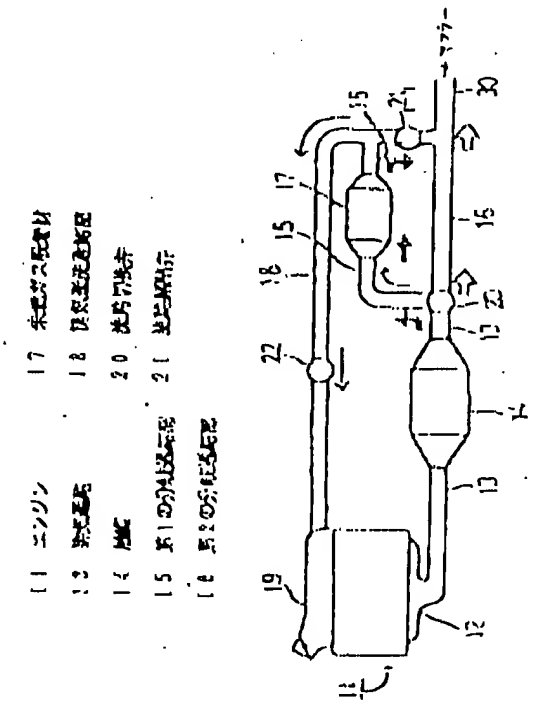
(54)【発明の名称】　内燃機関の排気浄化装置

(57)【要約】

【目的】　内燃機関において、排気浄化性能を向上することを目的とする。

【構成】　エンジン１１の始動時等の触媒１４の冷間時には、排気を触媒１４に流通して浄化処理し、浄化されなかった排気中の未燃ガスを全て第１の分岐通路部１５を介して吸着材１７に導き、排気中の未燃ガスをトラップさせる。触媒１４が昇温して活性化した後は、排気を触媒１４に流通して浄化処理した後、第１の分岐通路部１５と第２の分岐通路部１６の両方に流し、第２の分岐通路部１６を流れた排気をそのまま排出し、第１の分岐通路部１５を流れた排気により吸着材１７においてトラップした未燃ガスを離脱し排気還流通路１８からインテークマニホールド１９に導入させ再燃焼させる。



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【符号の説明】

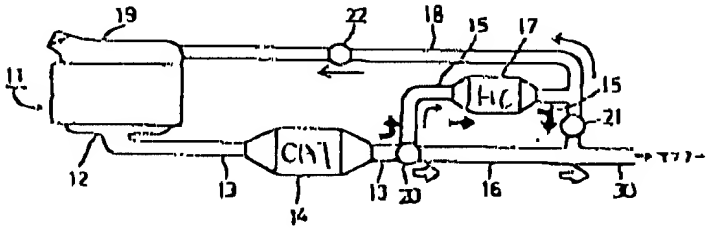
11 エンジン
13 排気通路
14 触媒
15 第1の分岐通路部
16 第2の分岐通路部
17 未燃ガス吸着材

8

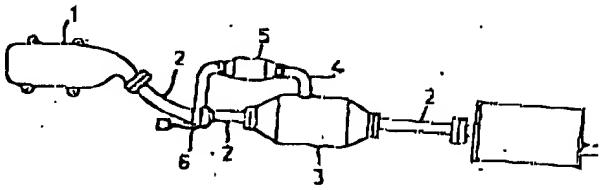
18 排気迂回通路部
20 流路切換弁
21 流路開閉弁
23 流路切換弁
24 流路切換弁
25 第3の分岐通路部

【図1】

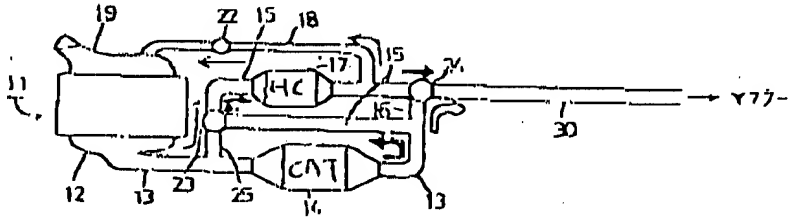
11 エンジン
13 排気通路
14 触媒
15 第1の分岐通路部
16 第2の分岐通路部
17 未燃ガス吸着材
18 排気迂回通路部
20 流路切換弁
21 流路開閉弁



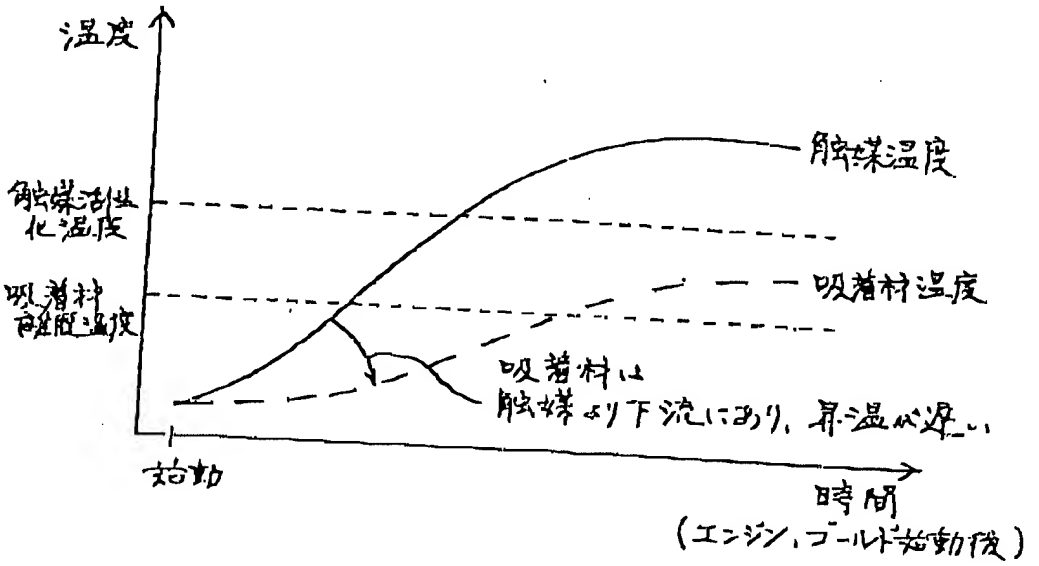
【図4】



【図2】



【図3】


温度
触媒温度
触媒活性化温度
吸着材温度
吸着材脱離温度
吸着材は触媒より下流にあり、昇温が遅い
始動
時間
(エンジン、コールド始動後)